

# NHS-HE Connectivity Project

Learning so far....

## NHS-HE Forum

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# Overview

- NHS-HE Forum
- NHS-HE Connectivity Project & Co-ordinator
- Scope & Geography
- Currently agreed NHS-HE Connectivity Models
- Case studies
- Connecting for Health (NPfIT) and N3
- Issues outstanding (subject to next session)
- Conclusion



# NHS-HE Forum

- Set up in 2001 by Prof Roland Rosner
- with Russell Group IT Directors' Support (RUGIT)
- Informal get together to try and improve connectivity and joint approaches to content
- Today is a new trial format
- Initial effort to widen participation



# NHS-HE Connectivity Project

- Objective:

**”To achieve good inter-operability between NHS and Higher Education (HE) networks that enable secure anytime, anywhere access by medical, **nursing** and allied profession students, clinical teachers and researchers”**

- [www.nhs-he.org.uk](http://www.nhs-he.org.uk)
- NHS-HE Co-ordinator post jointly funded between JISC and the NHS for two years
- Post based at UKERNA but also part of NHS



# Some of the Inputs

- UCISA Conference
- British Healthcare Computing Conference
- University Medical School Library Group's Open forum then LKDN Informatics Group
- UK Metropolitan Area Network (MAN) Managers' meeting
- Russell Group IT Directors
- UK IM&T Forum (NHS)
- HealthGRID 2005 conference
- Meeting with key "Connecting for Health" Leads
- Visits to Cardiff, Manchester and Cambridge



# Scope (HE)

- UK
- 32 Medical Schools (15 include Dental)
- ~70 Nursing & Allied Profession Schools
- 59 run core adult nursing
- Only ~17 linked directly with Medical Schools
- But “health” is big on partnerships



# Scope (NHS)



- UK
- England, Wales, Scotland & N Ireland have different policy makers
- England:
  - 28 Strategic Health Authorities
  - 302 Primary Care Trusts (PCTs)
  - 175 Acute Trusts (some now “Foundation”)
  - 84 Mental Health Trusts (19 PCTs, 5 Care Trusts)
  - 8 Care Trusts
  - 31 Ambulance Trusts



# Scope (NHS) contd

- Wales
  - 22 Local Health Boards
  - 13 Acute Trusts
  - 1 Ambulance Trust
- Scotland
  - 15 Health Boards
  - 28 Trusts (Acute & community)
- Northern Ireland
  - 4 Health and Social Services Boards
  - 16 Trusts (9 include Acute)
  - 1 Ambulance organisation







Source: [www.nhs.uk](http://www.nhs.uk)

Emerged or emerging groups of interest:

Wales, NW England, Scotland, NE England, Bristol, Birmingham, Hampshire



# Already agreed!

- Authenticated browser access
- NHS to HE access through firewalls
  - Eg. Kings College Hospital, Plymouth and Exeter, Birmingham
- Andrew Cormack paper (see [www.nhs-he.org](http://www.nhs-he.org))
- Three-tier client/server model - “thin client” eg using Citrix MetaFrame<sup>®</sup>

Citrix MetaFrame is a registered trademark or trademark of Citrix Systems, Inc in the United States and other jurisdictions



# Case Studies



- SHAUN (Addenbrookes) see [www.nhs-he.org.uk](http://www.nhs-he.org.uk)
- All Wales Project see [www.nhs-he.org.uk](http://www.nhs-he.org.uk)
- Bristol Clinical Academies
- Knowledge Spa, Truro
- Brighton-Sussex Medical School
- ? Birmingham, Barts & the London
- Do you know of any to be developed?



# New Projects:

- Regional developments eg North West
- Nottingham (with Queen's Medical Centre)
- Leicester
- Video-conferencing in Wales (hospital schools, joint meetings)
- Psy-grid at Manchester
- National Institute for Learning, Skills & Innovation at Warwick?
- Any others?

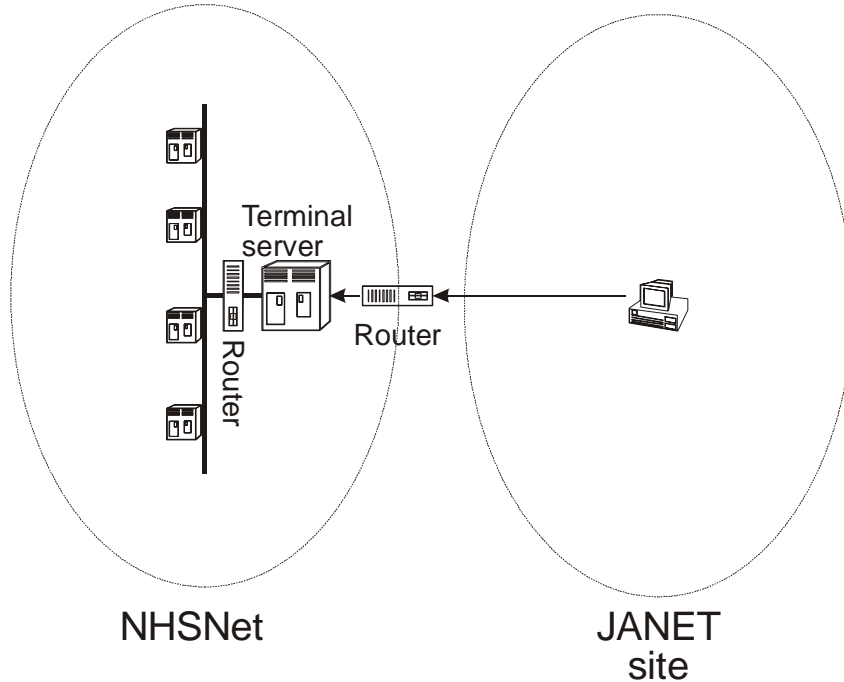


# “Cormack” Architecture

Internet/JANET

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- Three tier model  
(from Cormack 2002)



- Terminal Server with two interfaces on Trust network
- Firewall / router separating the University and Trust networks



# S.H.A.U.N components

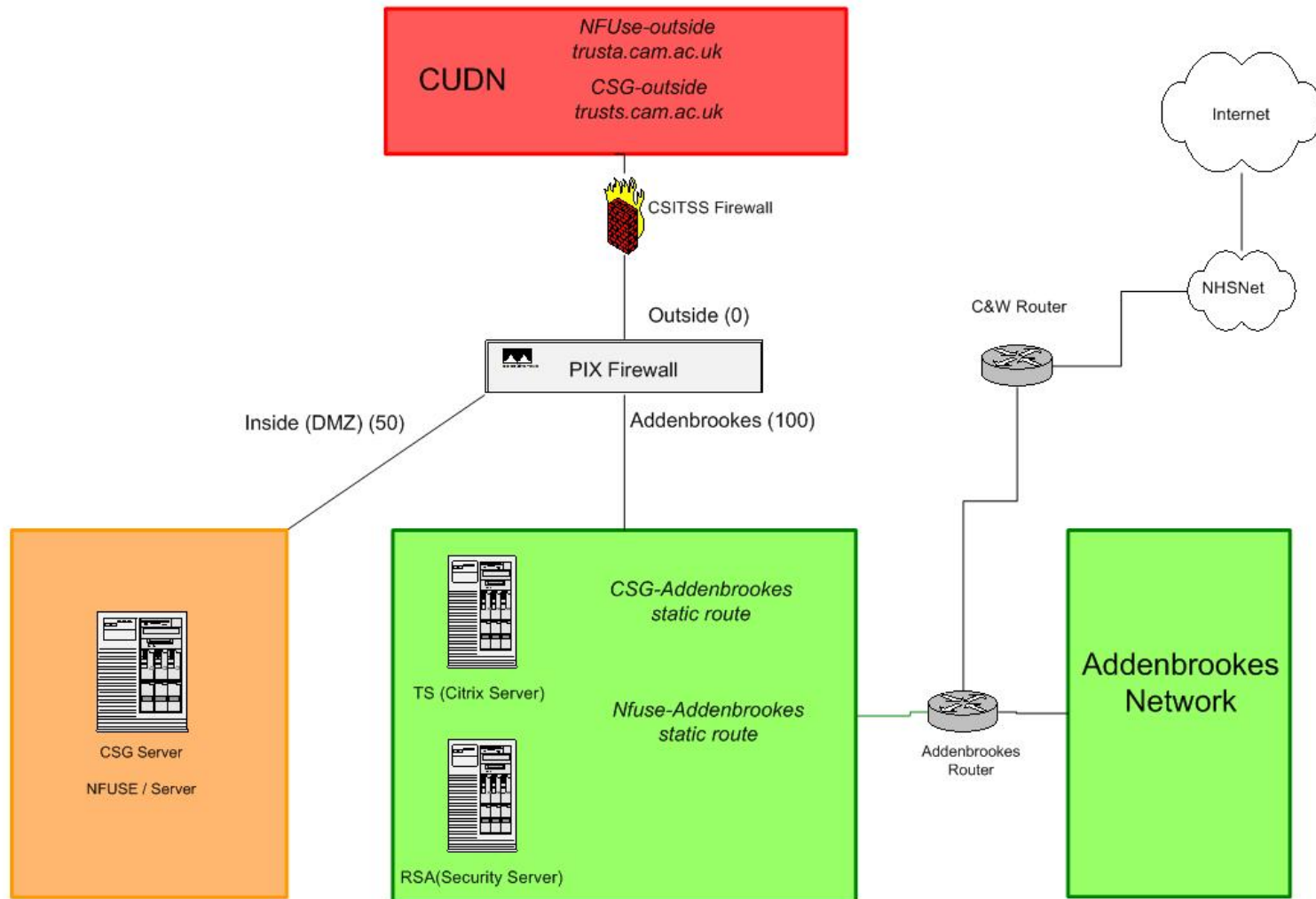
from Geof Smith, Addenbrookes

- PIX firewall with failover (EAL 4)
- Two factor RSA token authentication
- Citrix secure server technology
  - Citrix secure gateway
  - Data encryption (SSL)
  - Application runs on Trust network
  - Viewed with a web browser



# SHAUN Architecture

from Geof Smith, Addenbrookes



# S.H.A.U.N – Access

<http://trusta.medschl.private.cam.ac.uk>



**Citrix®**  
**NFuse™ Classic**

## Login

• Username

• Domain Password

• SecurID PASSCODE

Log In

## MetaFrame Application Portal

Please log in

- To log in to the application portal, type your user name, Domain password, and SecurID PASSCODE in the boxes at left.
- Click the Log In button to log in.

If you do not know your login information, please contact your help desk or system administrator.





# “Connecting for Health” and N3

- N3 is the new NHS broadband network being implemented as part of “Connecting for Health”(NPfIT)
- One of several England-wide NHS contracts
- Scotland also have their own N3 contract
- N3 contract is with BT, replaces NHSnet
- 5,000 out of 28,000 connections delivered (as of March)
- N3 to Janet Gateway
- New security model – security specific to the application
- Every NHS user in England to have a smart-card
- Any communication that includes patient, clinical or managerial sensitive data must be encrypted (but network level encryption not standard)



# Issues Outstanding Include:

- Engagement by the NHS – many other priorities, perceived high risk
- Organisational turbulence (eg demise of NHSIA)
- N3 to Janet Gateway specification
- Video-conferencing and telematics
- NHS based research data and the GRID
- Connectivity support for content initiatives eg Shibboleth
- And.....





- What is needed for Janet to carry clinical data as collateral to its education and research mission?
- Eg
  - Radiology academies



# Conclusion

(but subject to the next session!)

- There are some solutions, but more options needed.
- Security models are changing (in England anyway?)
- Trying to achieve more NHS IT buy-in
- Similar issues as “home working”
- Nationally agreed solutions, “Natural Community” or Regional implementation

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